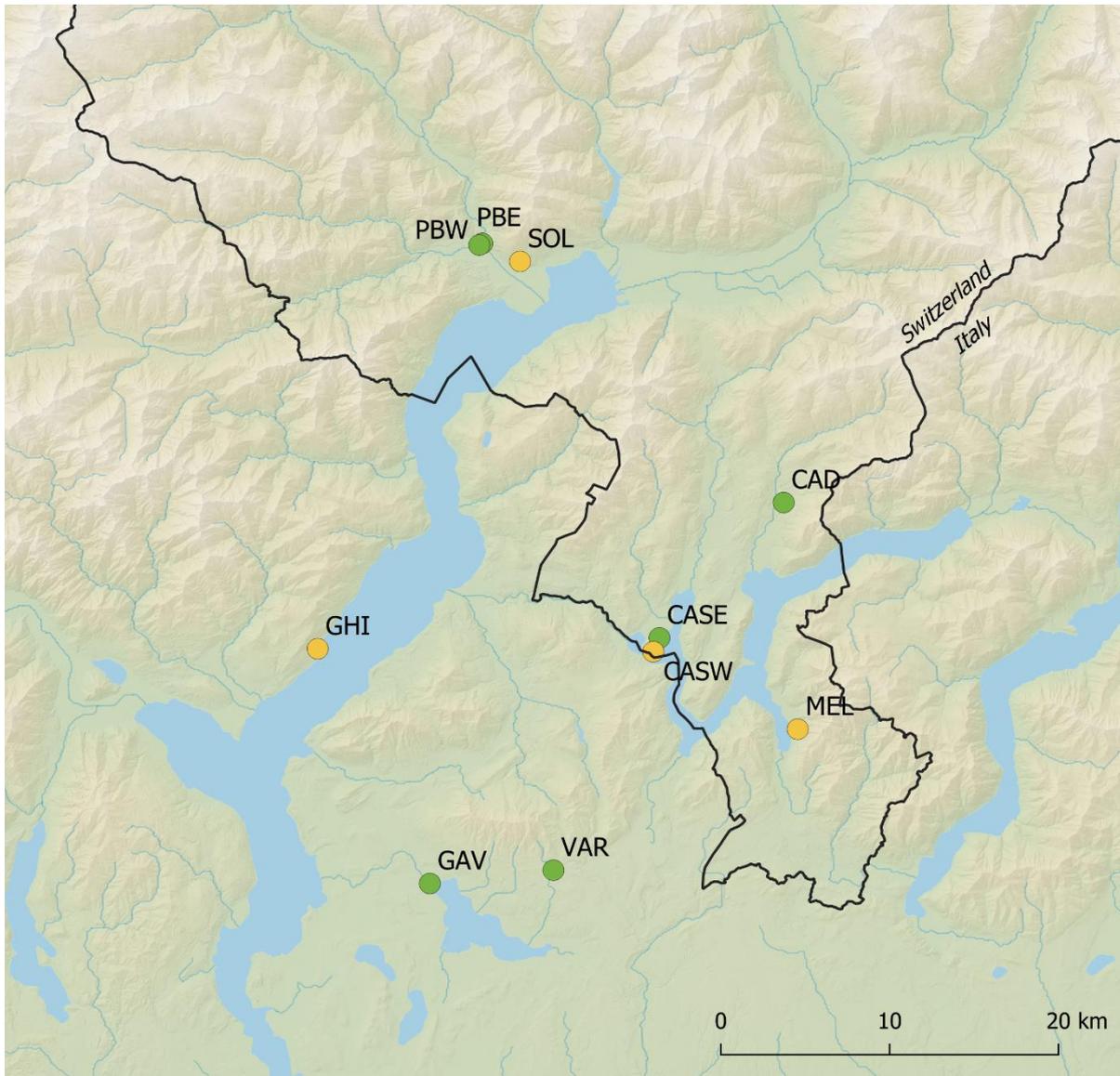


**Appendix S1.** Map of the study region.

Map of the study region showing the location of the 10 study sites in the southern Swiss and Italian Alps. Green dots represent mesic-moist sites (6 sites) and yellow dots represent mesic-dry sites (4 sites). The black line shows the Swiss-Italian border.



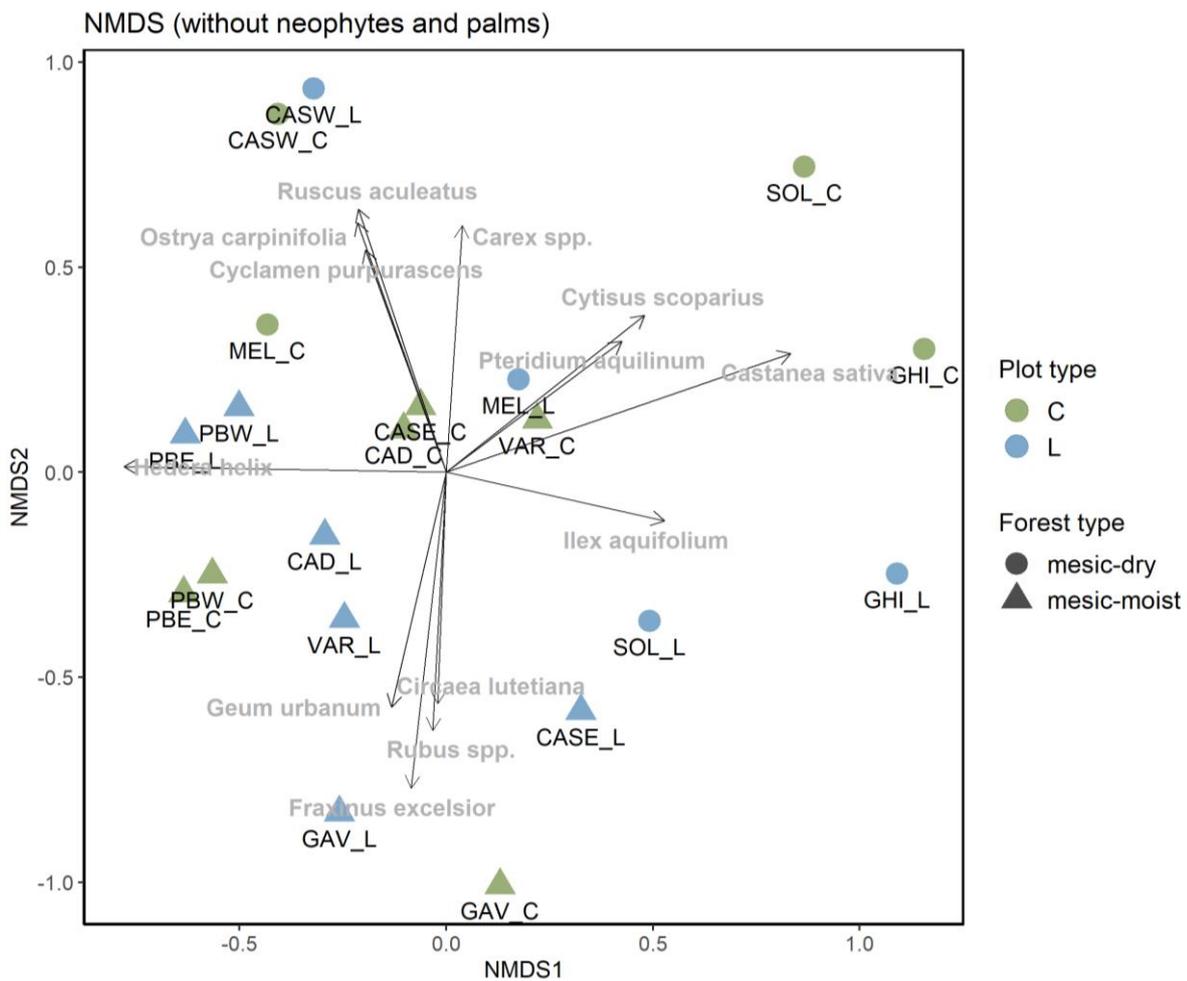
**Appendix S2.** Table with soil moisture indices and levels and geological setting for each site.

Soil moisture indices and levels according to Landolt et al. (2010) and geological setting for each site. Landolt et al. (2010) define a moisture-value of 2 (dry) as “exposed substrate in places with low humidity”, a moisture-value of 3 (mesic) as “medium moisture conditions” and a moisture-value of 4 (moist) as “substrate drying out only rarely, though hardly ever submerged”. The soil moisture index for each site was obtained by calculating the cover-weighted means (plant species’ maximum cover in the herb or shrub layer) of the Landolt moisture indicator values.

<b>Site</b>	<b>Soil moisture index</b>	<b>Soil moisture level</b>	<b>Geological setting</b>
CASW	2.60	mesic-dry	Limestone outcrop
GHI	2.77	mesic-dry	Crystalline bedrock
MEL	2.81	mesic-dry	Crystalline bedrock
SOL	2.89	mesic-dry	Crystalline bedrock
CASE	3.00	mesic-moist	Crystalline bedrock
CAD	3.04	mesic-moist	Crystalline bedrock
PBE	3.05	mesic-moist	Alluvial soil
PBW	3.07	mesic-moist	Alluvial soil
GAV	3.17	mesic-moist	Alluvial soil
VAR	3.27	mesic-moist	Alluvial soil / crystalline bedrock

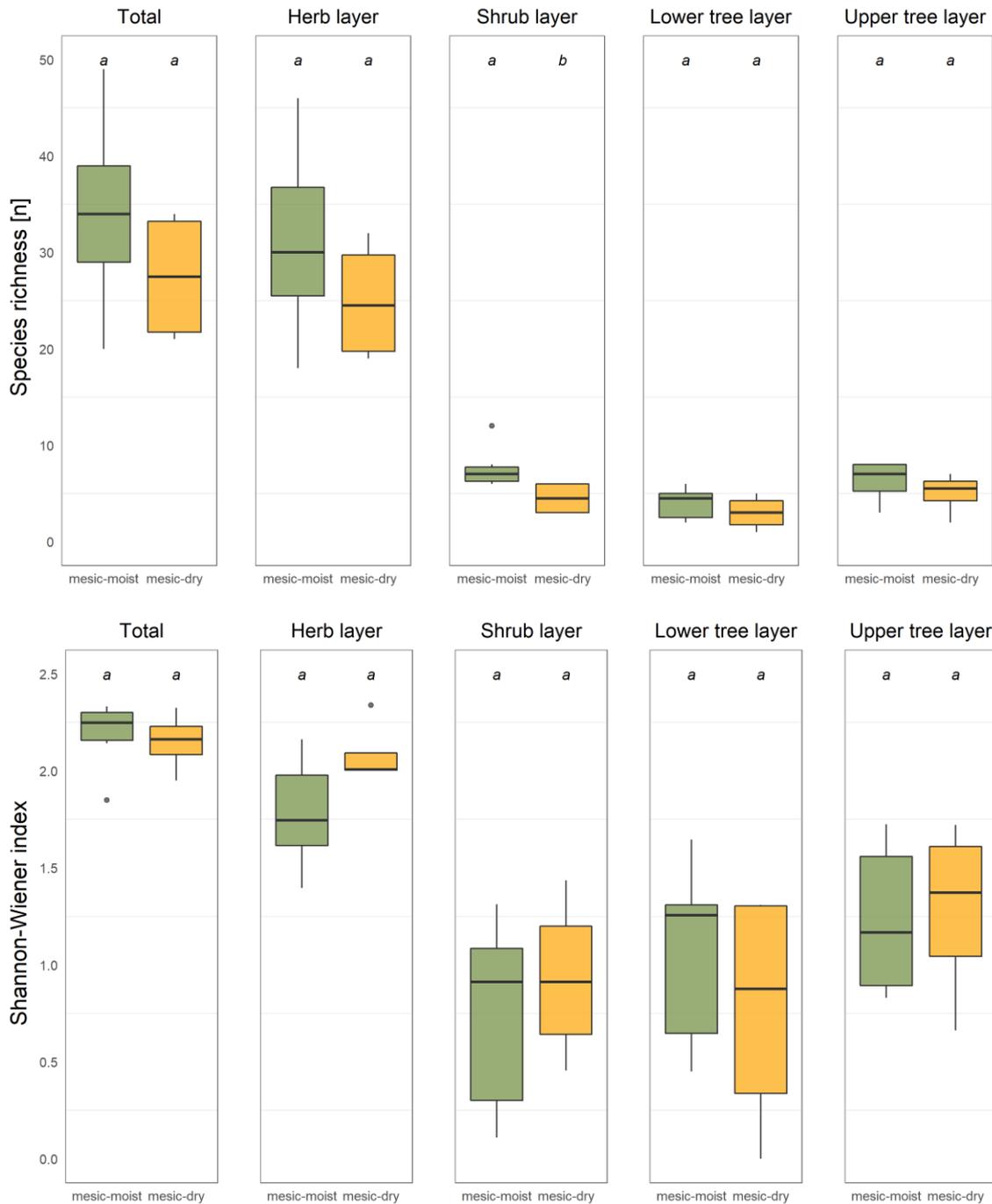
**Appendix S3.** Non-metric multidimensional scaling (NMDS) ordination plot for the native plant communities.

Non-metric multidimensional scaling (NMDS) ordination plot for the native plant communities (excluding *Trachycarpus fortunei* and other non-native plant species) of the 10 control and 10 intermediate plots. Green dots represent control plots (C) with no or very few individuals of *T. fortunei* and blue dots represent plots with a low density of *T. fortunei* (intermediate plots - L). Circles represent mesic-moist sites, triangles represent mesic-dry sites.



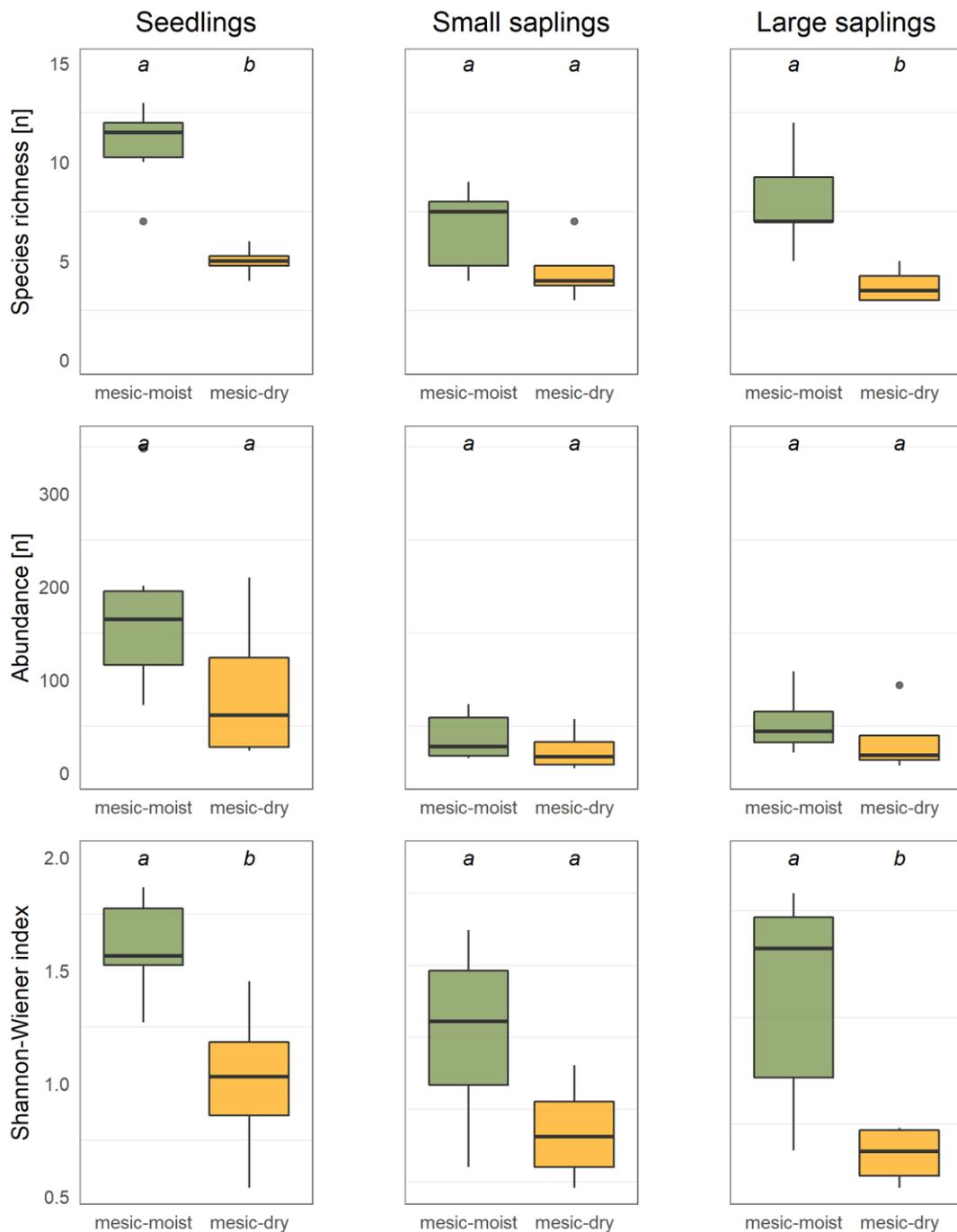
**Appendix S4A.** Comparison of plant species richness and Shannon-Wiener index in mesic-moist and mesic-dry sites.

Plant species richness (top row) and Shannon-Wiener index (lower row) in mesic-moist (green boxes) and mesic-dry sites (yellow boxes) in all forest layers (total), the herb layer, the shrub layer, the lower tree layer and the upper tree layer. Different letters (a, b) indicate significant differences ( $p < 0.05$ ) between groups (t-tests for normally distributed data, non-parametric Wilcoxon tests for non-normally distributed data).



**Appendix S4B.** Comparison of woody plant species richness, abundance and Shannon-Wiener index in mesic-moist and mesic-dry sites.

Woody plant richness (top row), abundance (center row) and Shannon-Wiener index (bottom row) at mesic-moist (green boxes) and mesic-dry sites (yellow boxes) for different height classes (seedlings = height < 50 cm, small saplings = height 50-130 cm, large saplings = height > 130 cm & DBH < 8 cm). Different letters (a, b) indicate significant differences ( $p < 0.05$ ) between groups (t-tests for normally distributed data, non-parametric Wilcoxon tests for non-normally distributed data).

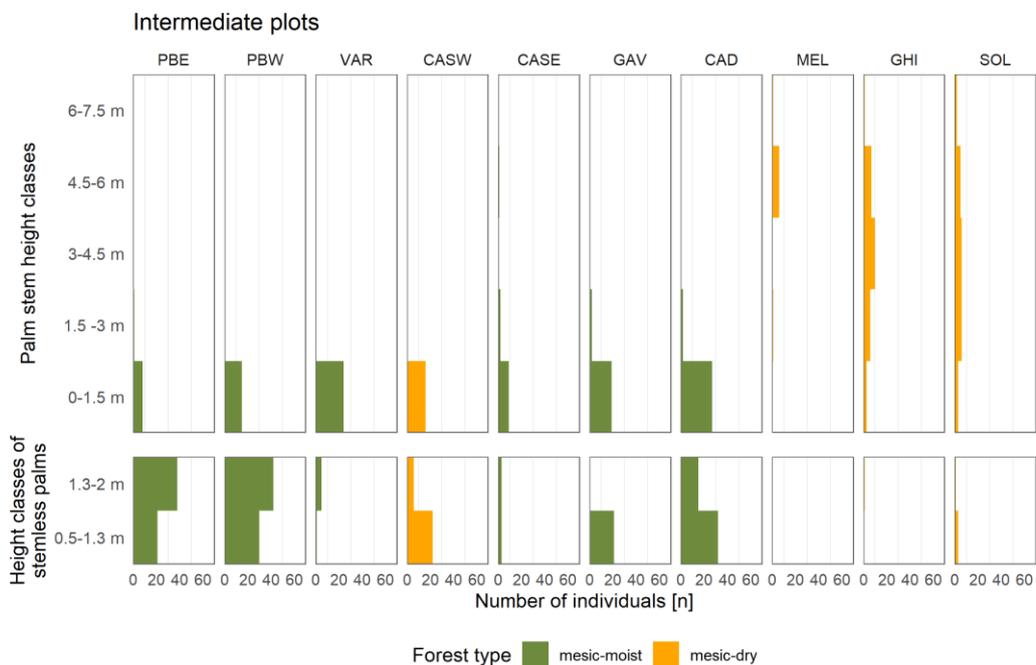
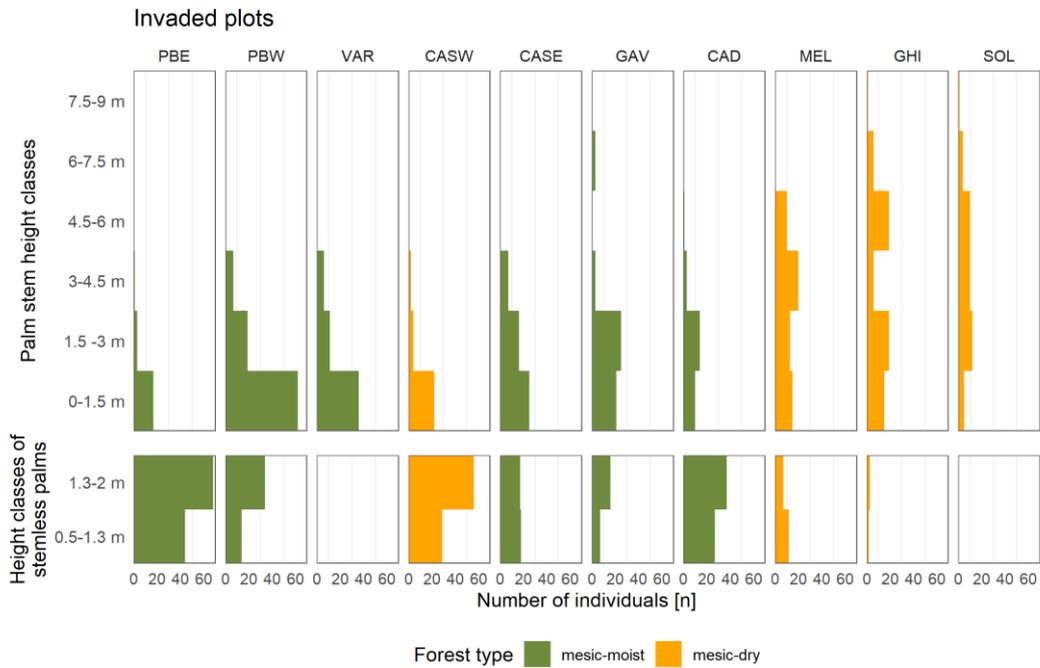


**Appendix S5.** Occurrence frequency and mean cover of woody and herbaceous neophytes per plot type. Evergreen species are highlighted in bold.

Taxon	Frequency [n]			Mean cover [%]		
	Ctrl.	Interm.	Invd.	Ctrl.	Interm.	Invd.
<b>WOODY</b>						
<i>Acer negundo</i>	1	0	0	0.50	0.00	0.00
<i>Ailanthus altissima</i>	0	0	2	0.00	0.00	11.25
<b><i>Cinnamomum glanduliferum</i></b>	1	3	2	0.50	7.01	15.25
<i>Diospyros lotus</i>	2	2	1	1.51	10.76	7.50
<b><i>Elaeagnus pungens</i></b>	3	4	5	1.17	1.75	0.61
<b><i>Jasminum fruticans</i></b>	0	1	0	0.00	0.01	0.00
<b><i>Ligustrum lucidum</i></b>	0	1	2	0.00	0.50	0.01
<i>Ligustrum sinense</i>	1	0	0	40.50	0.00	0.00
<b><i>Lonicera japonica</i></b>	2	5	4	7.76	0.90	1.51
<i>Lonicera nitida</i>	0	0	1	0.00	0.00	0.01
<b><i>Mahonia aquifolium</i></b>	1	0	0	0.01	0.00	0.00
<i>Paulownia tomentosa</i>	1	0	1	0.00	0.00	2.00
<b><i>Phyllostachys viridiglaucescens</i></b>	0	1	0	0.00	0.01	0.00
<b><i>Pinus nigra</i></b>	0	1	0	0.00	10.00	0.00
<b><i>Pinus strobus</i></b>	1	0	0	0.01	0.00	0.00
<b><i>Prunus laurocerasus</i></b>	5	7	4	4.30	2.43	0.13
<i>Prunus serotina</i>	2	0	1	7.76	0.00	5.50
<b><i>Quercus ilex</i></b>	0	1	0	0.00	0.50	0.00
<i>Robinia pseudoacacia</i>	8	6	7	5.88	17.01	20.15
<i>Spiraea japonica</i>	1	1	0	0.01	0.01	0.00
<b>HERBACEOUS</b>						
<i>Impatiens glandulifera</i>	1	1	1	0.01	0.01	0.01
<i>Panicum dichotomiflorum</i>	1	0	0	3.00	0.00	0.00
<i>Parthenocissus quinquefolia</i>	1	0	1	0.50	0.00	0.01
<i>Phytolacca americana</i>	0	1	0	0.00	0.51	0.00
<i>Reynoutria japonica</i>	0	1	0	0.00	0.01	0.00

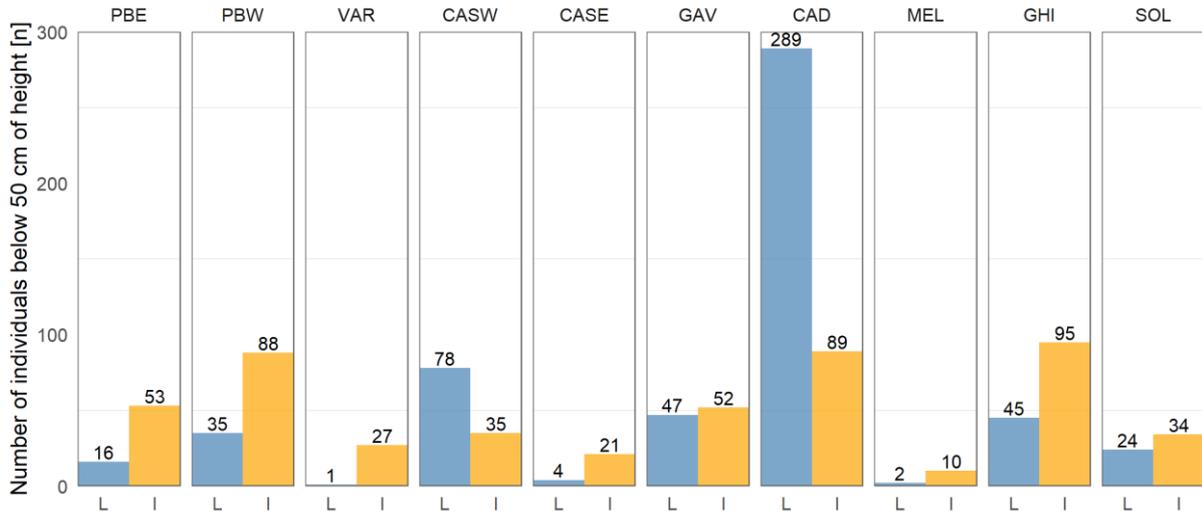
**Appendix S6.** Height structure of the *Trachycarpus fortunei* populations per plots.

Height structure of the *Trachycarpus fortunei* populations in invaded (top figure) and intermediate plots (bottom figure). Sites are ordered from the left to the right according to the mean stem height of the palm population (with the youngest populations on the left and older populations on the right). Green bars represent mesic-moist forests and orange bars represent mesic-dry forests.



**Appendix S7.** Number of *Trachycarpus fortunei* seedlings per site

Number of *Trachycarpus fortunei* seedlings (individuals below 50 cm of height) in intermediate (“L”, blue bars) and invaded plots (“I”, yellow bars).



**Appendix S8.** Photo of mammal herbivory on *Trachycarpus fortunei*

Wild growing *Trachycarpus fortunei* individual in Solduno, Switzerland showing traces of mammal herbivory, likely from deer.

